UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/967,065	09/28/2001	Abhay A. Dharmadhikari	42390.P11810	4898

8791 7590 01/29/2007	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN	LIN, WEN TAI	
12400 WILSHIRE BOULEVARD		
SEVENTH FLOOR	ART UNIT	PAPER NUMBER
LOS ANGELES, CA 90025-1030	2154	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>4/27/2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-33* is/are pending in the application.

  4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
  Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 and 3-33 are presented for examination.

2.   The text of those sections of Title 35, USC code not included in this action can be found in the prior Office Action.

Claim Rejections - 35 USC § 102

3.   Claims 1 and 23-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Xu et al.[U.S. PGPub 20030026211].

4.   As to claim 1, Xu teaches the invention as claimed including: a method for selecting a network interface for a network node [e.g., the MN (mobile node) of Fig. 1A; paragraph 21], the method comprising:

receiving a policy specifying user preferences provided by a user at the network node [e.g., Fig.5; Abstract; paragraphs 5, 16 and 27; PIU of Fig.4; note that since the QoS is a policy formed based on the user's preferences, the information must have been provided by the user of the network node];

monitoring a network interface characteristics at the network node [e.g., paragraph 6, wherein monitoring the bearer type is an act of monitoring the network interface characteristic];

selecting for the network node a network interface from a plurality of network interfaces

by matching the user preferences to the network interface characteristic [paragraphs 17 and 21;

e.g., the bearer preference information is matched against the traffic load/resource availability

data related to the multiple bearers]; and

modifying a routing table entry associated with the selected network interface, wherein

the routing table entry includes a metric field and further wherein modifying the routing table

entry includes modifying the metric field [paragraphs 34-35; e.g., modifying the B and T fields].

5.   As to claims 23-24, since the features of these claims can also be found in claims 1, they

are rejected for the same reasons set forth in the rejection of claims 1 above.

Claim Rejections - 35 USC § 103

6.   Claims 3-5 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xu

et al.(hereafter "Xu")[U.S. PGPub 20030026211], as applied to claims 1 and 23-24 above,

further in view of Nakamura; et al.(hereafter "Nakamura;")[U.S. Pat. No. 6553031].

7.   As to claims 3-5, Xu teaches that modifying the B (busy flag) and T (time indicator)

fields so as to indicate to the traffic manager whether an arrival packet can be treated as a new

session [paragraph 33]. In a sense, by marking B=1 a packet arrived before a certain maximum

time since a previously arrived packet (of the same user) has a higher priority of using the same

selected network interface.

8.   Xu does not specifically teach that the routing entry includes a metric field for adjusting

the priority associated with the selected network interface.

However, in the same field of endeavor, Nakamura; teaches a routing table having a

plurality of entries each associated with an entry priority [Nakamura;: 15, Fig.5; 154, Fig.6; i.e.,

a metric field], which can be set to 1 (i.e., raising the priority) or set to 0 (i.e., lowering the

priority) depending on a connection establishment flag so as to indicate that the associated low

priority entries could be deleted (e.g., when no idle area exist for the table) [Abstract; col.7, lines

1-14].

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to incorporate Nakamura;'s metric field for controlling the next-hop address in Xu's

routing table because Nakamura;'s method is an efficient way for marking Xu's plurality of

network interfaces (each associated with a routing table's out port) as passive or active.

9.   As to claims 25-27, since the features of these claims can also be found in claims 1, 3-5

and 23, they are rejected for the same reasons set forth in the rejection of claims 1, 3-5 and 23

above.

10.   Claims 6-11 and 28-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Xu et al.(hereafter "Xu")[U.S. PGPub 20030026211], as applied to claims 1, 3-5 and 23-27

above, further in view of Lindell [U.S. PGPub 20020039892].

11.   As to claims 6-11, Xu further teaches that receiving a policy includes receiving a policy

specifying a network preference based on the availability of the network interface [paragraphs 16

and 27].

Xu does not specifically teach that the preference could also be based on the cost, battery

consumption, signal strength, latency value, bandwidth, or reliability associated with the network

communicably coupled to the preferred network interface.

However, in the same field of endeavor, Lindell teaches a system and method for network

and service selection in a mobile communication station wherein a user's preference can be

expressed in terms of the network or its associated interfacing elements' cost [e.g., claim 6],

battery consumption [e.g., claim 7], signal strength [e.g., claim 8], latency value [e.g., claim 11],

bandwidth [e.g., claim 10], or reliability [e.g., claim 12].

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to incorporate Lindell's aforementioned parameters as Xu's network interface

selection factor because such selection choices would tailor a customer's need and further

promote the use of Xu's system.

12.   As to claims 28-33, since the features of these claims can also be found in claims 1, 6-11

and 23, they are rejected for the same reasons set forth in the rejection of claims 1, 6-11 and 23

above.

13.   Claims 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xu et

al.(hereafter "Xu")[U.S. PGPub 20030026211], as applied to claims 1, 3-11 and 23-33 above.

14.   As to claims 12-14, Xu teaches using QoS policies to effect traffic management (which

naturally includes how the active interfaces are chosen along the routing path can be imposed,

required, or suggested by the application sending the information, wherein the application is a

software-based configuration program [paragraph 16]. Thus, although Xu does not specifically

teach how the policy is received, it is obvious that an application (along with path-forming

policies) may be originated from a user interface, a configuration file or an environment variable,

because Xu's network interface preferences is specified in the QoS policy and is adapted to the

network environment.

15.   As to claims 15-22, Xu teaches substantially the same invention as described in claims 1-

14 above. Xu is silence about using: (1) a user interface for specifying user preferences; (2) a

policy manager for performing the selection of appropriate network interfaces; and (3) a link

monitor for monitoring the status of network interface.

        However, since Xu teaches that selection of active interfaces is based on a QoS

preference [paragraph 5 and 16], it is obvious that such preference could have been directly

acquired from a user interface. Further, there must be some means (or calling it a policy

manager) in Xu's system to perform the selection based on the expressed preferences; and there

must be some means for monitoring the availability of a network interface because Xu system's

need to implement the QoS policy in accordance with the user's preference and the various

conditions of network traffic. [Abstract; paragraphs 5, 16, 27 and 34-35].

16.   Applicant's arguments filed on 4/27/2006 for claims 1 and 3-33 have been fully considered but they are not deemed to be persuasive.

Specifically, Applicant argues that (1) Xu's selected interface is not at the node used by the user to enter the network interface preferences; and (2) the interface characteristics that Xu uses for selecting the interface are not the characteristics being monitored at the same node used by the user.

17.   The examiner respectfully disagrees with Applicant's argument.

As to point (1): the claim language does not require that the selected interface be the same interface at the node as that which the user uses to enter network interface preferences. Rather, the claim requires that a user's specified preferences (in a form of QoS policy) must be obtained first and the selected network interface is a result of matching the preferences to a set of network interface characteristics.

As to point (2): it is noted that Applicant does not clearly define the terms "network interface" and "interface characteristics". However, based on the description at paragraphs 6-8 of the specification, the word "interface" could mean interfacing to different types of network (such as wired and wireless), and switching between different networks means switching between different network interfaces. As such, selecting one of network types also implies selection of a corresponding network interface; likewise monitoring the characteristics of a network interface is equivalent to monitoring the characteristics of the network itself, because it all boils down to network associated characteristics such as bandwidth, signal strength and battery consumption [see paragraph 44 of Applicant's specification].

In line with the above interpretation, it is noted that Xu teaches that the bearer preference information can be obtained from the mobile node [paragraph 5], and an optimal bearer is selected based on bearer characteristics such as traffic data and bearer availability etc. [Abstract], while a selected bearer's characteristics are monitored at the mobile node [paragraph 6]. Such teachings clearly read on the independent claims.

18.   THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

19.   A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Examiner note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the

individual claim, other passages and figures may apply as well. It is respectfully requested from

the applicant in preparing responses, to fully consider the references in entirety as potentially

teaching all or part of the claimed invention, as well as the contest of the passage as taught by the

prior art or disclosed by the Examiner.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Wen-Tai Lin whose telephone number is (571)272-3969. The

examiner can normally be reached on Monday-Friday(8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Nathan Flynn can be reached on (571)272-1915. The fax phone numbers for the

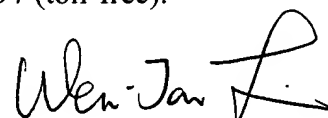organization where this application or proceeding is assigned are as follows:

(571)273-8300 for official communications; and

(571)273-3969 for status inquires draft communication.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wen-Tai Lin

1/18/2007